WHAT IS CLAIMED IS:

1. A method of manufacturing a golf ball comprising:

a first step of forming a bowl-shaped half shell from a thermoplastic resin composition;

a second step of putting two half shells and a solid core covered with the half shells in a mold including upper and lower portions, each of which has a hemispherical cavity, in a state in which the mold is opened;

a third step of clamping the mold;

a fourth step of heating the thermoplastic resin composition in a spherical cavity formed by the mold clamping and pressurizing the thermoplastic resin composition at a pressure of 5 kgf/cm^2 to 50 kgf/cm^2, and causing the excessive thermoplastic resin composition to flow out of the spherical cavity; and

a fifth step of heating the thermoplastic resin composition in the spherical cavity and pressurizing the thermoplastic resin composition at a pressure of 70 kgf/cm^2 or more, and forming a cover,

wherein a total volume of the two half shells put at the second step is set to be 105% to 120% of a volume of the cover.

2. The method of manufacturing a golf ball according to claim 1, wherein a difference (T2 - Ts) between the highest temperature T2 of the mold and a softening point Ts of the thermoplastic resin composition through the fourth and fifth steps is 30℃ to 80℃.

3. The method of manufacturing a golf ball according to claim 2, wherein a transition from the fourth step to the fifth step is carried out within a period of 30 seconds before and after the mold reaches the highest temperature T2.

4. The method of manufacturing a golf ball according to claim 1, wherein a difference (Ts - T1) between a softening point Ts of the thermoplastic resin composition and a temperature T1 of the mold at time of start of the fourth step is 15℃ or more.

5. The method of manufacturing a golf ball according to claim 1, wherein the cover formed at the fifth step has a nominal

thickness of 0.3 mm to 1.0 mm.